

BYKOVA, I.N.; RASHEVSKAYA, S.T.; KAZARYAN, N.A.; RUBTSOVA, Ye.S.

Analysis of hydroxynaphthoic acids and naphthols in process
melts by titration in nonaqueous solutions. Zav. lab. 31
no.4:415-417 '65. (MIRA 18:12)

1. Moskovskiy khimiko-tekhnologicheskly Institut im. D.I.
Mendeleyeva i Rubezhanskly khimicheskly kombinat.

84981

S/065/60/000/007/005/008/XX

E194/E484

26.2192

AUTHORS: Sentyurikhina, L.N., Oparina, Ye.M., Rubtsova, Z.S. and
Suvorovskaya, N.A.

TITLE: Solid Lubricant Coatings

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.7,
pp.24-29

TEXT: Published work, mostly foreign, on solid lubricants is briefly reviewed. The original experimental work described here was concerned with molybdenum disulphide. Solid lubricants have poor protective properties, the lubricating film if once damaged may not be easily replaced and they do not extract heat. Their service life may be increased by binding them to the metallic surface by appropriate treatment. Very finely divided powders are necessary to secure good adhesion to metals. The surface to be treated must also be of good finish and the present tests were made with surface finishes classes 10 to 12, i.e. with average height of roughness of 0.05 to 0.1 microns. The usual methods of depositing solid lubricants on metal surfaces are described. The choice of binder is discussed, the most heat resistant resins produced in the USSR being silicone and combinations of silicones with acrylic and Card 1/3

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Solid Lubricant Coatings

epoxide polymers. The hardening treatment used depended on the properties of the binder, the temperatures ranged from 150 to 350°C, depending on the resin used. The choice of solvent for deposition of resin and solid lubricant is important, ethanol was used in the tests because it is particularly convenient for use with the molybdenum disulphide which was used. Data on the permissible dilution of the resin with ethanol is given in Table 1. Tests were made with suspensions of molybdenum disulphide ranging in concentration from 6 to 37%, and the relationship between film thickness and molybdenum disulphide concentration is given in Table 2. Uniform films could not be obtained with molybdenum disulphide concentration below 10%. The adhesion of the solid lubricant coatings to metal surfaces was assessed by adhesionometers of the Deryagin and Orlov systems, by a press tool and in other ways. However, difficulty was experienced in making the assessment because the film could not be removed as a thin sheet. Information about resistance of the coating to rubbing was obtained in an instrument in which a shaft rotating at constant speed is pressed against a sheet coated with solid lubricant. As soon as the film of solid

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lubricant is worn off there is metal to metal contact and a lamp is lit. The time required to break down is a criterion of mechanical strength of film. Test results with molybdenum disulphide films ranging from 1 to 39 microns thick are given in Tables 3 and 4. Further results obtained in a Timken tester are given in Table 4. It is shown that the quality of the film depends on the nature of the binder, the method of deposition of the film, the conditions of hardening and the thickness of the film. There are 1 figure, 4 tables and 10 references: 4 Soviet (one of them probably translated from English), 4 English and 2 German.

ASSOCIATION: VNII NP

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15-6500

2550E

S/065/61/000/007/001/005
E030/E435

AUTHORS:

Sentyurikhina, L.N., Malyshev, B.N., Oparina, Ye.M.
Rubtsova, Z.S.

TITLE:

Solid high temperature high vacuum greases

PERIODICAL:

Khimiya i tekhnologiya topliv i masel, 1961, No.7,
pp.13-16

TEXT: An experimental study has provided the optimum method of applying molybdenum disulphide to metallic surfaces as a lubricant. The films are stable up to decomposition temperatures which depend on the nature and pressure of the gas as follows: inert gas, at atmospheric pressure, up to 1300°C; in air, at atmospheric pressure, 45°C; 800° at 10⁻⁴ mm Hg; 900° at 10⁻⁵ mm Hg; 1100° at 10⁻⁶ mm Hg. The purity of the MoS₂ used was 99.5%. The poor adhesion properties of MoS₂ were best overcome by washing the metal surfaces in alkali to remove oxide films, and then spraying on a solution of MoS₂. The nozzle to metal distance is fairly critical, the optimum being established at about 20 cm. Several types of solvent were tested: 1. those strongly adhering to metal (BMK-5 (BMK-5), Э-41 (E-41)) (nitrocellulose); 2. those with carbonaceous ash on heating (K-2-12-01, Э-116 (E116));

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L 7710-66 EWT(m)/EFF(c)/T/EWP(t)/EWP(b) IJP(c) JD/DJ

ACC NR: AP5027588

SOURCE CODE: UR/0065/65/000/011/0041/0045

AUTHOR: Rubtsova, Z. S.; Sentyurikhina, L. N.

ORG: VNII NP

TITLE: Molybdenum disulfide-based solid lubricants

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 11, 1965, 41-45

TOPIC TAGS: solid lubricant, molybdenum disulfide, lubricant performance

ABSTRACT: The All-Union Scientific Research Institute for Oil and Gas Refining and the Production of Synthetic Fuel (VNII NP) has developed several MoS₂-based solid lubricants. These VNII NP brand lubricants are produced in the form of finely divided powders, solid compacts, pastes or solid lubricant castings. The lubricants (whose composition is not given) and their applications are tabulated in the source. Service life and antifriction properties were studied for the solid lubricant coatings. There are suspensions of MoS₂ in such solvents as amyl alcohol, water, or butyl acetate with organic (VNII NP-212 and -230) or organosilicon or inorganic (VNII NP-209, -213, and -229) film-forming additives. The experiments were conducted in air, vacuum (10⁻⁵ torr), argon, and at -224 and 0-700C. In addition, the effect of Co⁶⁰ irradiation was studied under static conditions. The testing methods are described in the source. The results of the study, given in the form of tables and graphs, indicate that the service life of the solid lubricant coatings is longest at

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100—200C; it is sharply shortened above 300C. VNII NP-212 and -213 perform best in air both at room and high temperatures owing to better adhesion of organic film-forming additives to metals. The working temperatures of VNII NP-209, -213, and -229 increase to 500—600C at 10^{-5} torr and in argon. Low temperatures (-254C) and irradiation with a dose of 10^8 — 10^9 rad do not appreciably reduce the service life of solid lubricant coatings. The service life of these coatings decreases sharply in water or mineral oil. The performance of MoS_2 -based solid lubricant coating is highly dependent on the preliminary treatment of the metal surfaces and the thoroughness of their degreasing. Orig. art. has: 3 figures and 3 tables. [BO]

SUB CODE: FP/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 004/ ATD PRESS: 4/4/

Card 2/2

L 00318-66 EWT(m)/EWP(w)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) BW/JD/DJ/GS/RM

ACCESSION NR: AT5020437

UR/0000/65/000/000/0131/0134

AUTHORS: Sentyurikhina, L. N.; Rubtsova, Z. S.; Klimov, K. I.

TITLE: Investigation of life and antifriction properties of solid lubricants

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazkam. Teoriya smazochnogo deystviya i novyye materialy (Theory of lubricating action and new materials). Moscow, Izd-vo Nauka, 1965, 131-134

TOPIC TAGS: solid lubricant, lubricant property, molybdenum disulfide / VNII NP 212 lubricant, 213 lubricant, 229 lubricant, 230 solid lubricant

ABSTRACT: Four molybdenum-disulfide based solid lubricants developed by VNIINE, differing only by the type of film-producing substance used, were investigated for their life and antifriction properties. The destruction of the film producer was measured on apparatus PIM-2 as described by V. M. Martynov (Neftepererabotka i neftekhimiya. Sbornik, vyp. 8, M., Goskhimizdat, 1963) while the frictional stability was measured on apparatus ITK developed by Klimov (no reference given). The friction couple consists of a 5-mm diameter by 50-mm long roller and a ni-chrome strip (0.1 mm thick by 4.5 mm wide) which is loaded with 300 gm (included angle of 120°) against the roller rotating at 800 rpm; the strip moves at 4 mm/min

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L 00318-66

ACCESSION NR: AT5020437

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with respect to the roller, giving a sliding speed of 0.21 m/sec; the coefficient of friction μ is determined by torque measurement. After sand blasting and parkerizing, the steel surface was coated 20 micron thick with VNII NP-212 (K-41 102 - ureaformaldehyde resin film producer), 213 (K-55 silico-organic resin), 15-229 (sodium silicate), or 230 (EP-096 epoxy resin) lubricants. Weight loss and friction characteristics were determined as a function of temperature (150-400C). It was found that the weight loss (based on 30-minute test) of the organic binders EP-096 and K-41 102 was higher (up to 20% at 200-350C) than that for nonorganic K-55 and Ka_2SiO_2 (5-6% at 300-350C). The life and friction coefficient curves (see Figs. 1 and 2 on the Enclosure) were found to have maxima and minima respectively at $\approx 100C$. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Nauchnyy sovet po treniyu i smazkam, AN SSSR (Scientific Committee on Friction and Lubrication, AN SSSR)

SUBMITTED: 22May65

ENCL: 02

SUB CODE: FP

NO REF SOV: 006

OTHER: 007

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L 00318-66

ACCESSION NR: AT5020437

ENCLOSURE:

01

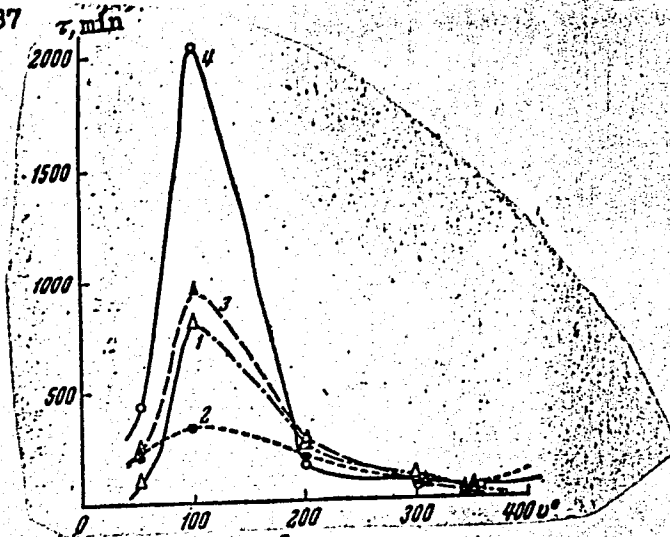


Fig. 1.

Life of solid lubricants:
1- VNII NP-213; 2- 229; 3- 230; 4- 212

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L 00318-66

ACCESSION NR: AT5020437

ENCLOSURE: 02

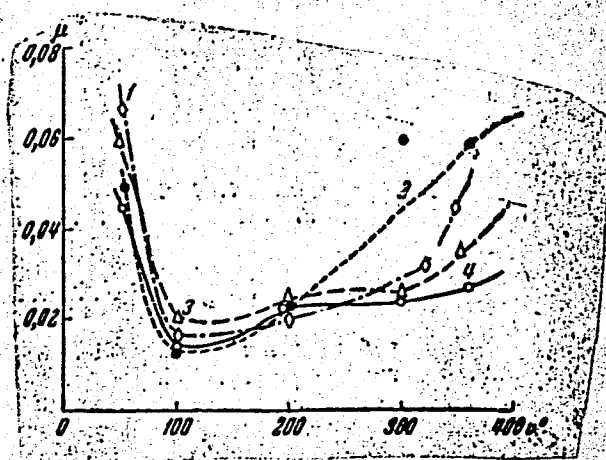


Fig. 2.
Friction coefficients:
(same as Fig. 1)

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L 14718-66 EWT(m)/T DJ

ACC NR: AP6004284

(A)

SOURCE CODE: UR/0117/66/000/001/0030/0031

AUTHORS: Oparina, Ye. M. (Candidate of technical sciences); Sentyurikhina, L. N. (Candidate of chemical sciences); Markov, V. A.; Rubtsova, Z. S.

ORG: none

TITLE: Dry lubricants with molybdenum disulfide, and the lowering of instrument wear

SOURCE: Mashinostroitel', no. 1, 1966, 30-31

TOPIC TAGS: lubricant, lubricant additive, lubricant component, high temperature lubricant, molybdenum disulfide / NP-229 lubricant

ABSTRACT: This is a comment on a paper previously published by M. S. Beletskiy, I. Ts. Raykhenshteyn, and O. K. Shatalova (Mashinostroitel' No. 7, 1965), in which those authors disputed the claim of Ya. K. Terent'yev that the solid lubricant (developed by him and containing MoS_2) had any wear-resistant properties. The present authors point out that by mixing MoS_2 with a suitable lacquer or resin it is possible to create a thin protective layer on the surface of cutting tools. Attention is drawn to several such lubricants developed by the All-Union Scientific Research Institute for Reprocessing of Petroleum (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefi) (in particular, lubricant VNII

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UDC: 621.892:661.877

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L 14713-06

ACC NR: AP6004284

NP-229), which have been successfully used in industry. In some cases, the application of the lubricant increased the durability of instruments by a factor of 2 to 3. Orig. art. has: 1 table.

SUB CODE: 11/ SUBM DATE: none

BVK

Card 2/2

RUBTSOVA, Z.S.; Sentyurikhina, L.N.

Solid lubricants with a base of molybdenum disulfide.

Khim. i tekhn. topl. i masel 10 no.11:41-45 N '65.

(MIRA 1981)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

L 02962-67 ENT(m)/EMP(j)/I IJP(c) RM
ACC NR: AP6032844 (A,N) SOURCE CODE: UR/0065/66/000/010/0046/0051

AUTHOR: Sentyurikhina, L. N.; Klimov, K. I.; Rubtsova, Z. S.; Rudakova, L. F.

ORG: VNII NP

TITLE: Effect of temperature on the service life of solid film lubricants

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 10, 1966, 46-51

TOPIC TAGS: solid film lubricant, thermal oxidative stability, service life, friction coefficient, film forming material, additive

ABSTRACT: A study has been made of the effect of temperature on the thermal-oxidative stability and service life [in air] of solid film lubricants based on certain organic and inorganic film-forming materials (see Table 1) which contain MoS₂ or graphite additives [percentage unspecified]. The thermal-oxidative stability of the materials was estimated from weight loss on the PIM-2 apparatus described previously (Martynov, V. M. Neftepererabotka i neftekhimiya, no. 8, 1963). Unlike the urea-formaldehyde film-forming material, the organosilicon and epoxy materials and, in particular, Na₂SiO₂, were shown to exhibit high thermal-oxidative stability at 300—350C. This stability was considerably improved by the addition of MoS₂. The service life (τ) and friction coefficient (μ) of the films were determined on the ITK apparatus described previously (Sentyurina, L. N. et al. Teoriya smazochного deystviya. Izd. Nauka 1965). They were low for films based on organofluorine or organic

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UDC: 621.893

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ACC NR: AP6032844

Film-forming material		Service life (in min) at				
Type*	Brand	40 °C	100 °C	200 °C	300 °C	350 °C
Inorganic organosilicon	KIP-9	75	144	122	28	3
	K-66	98	230	120	—	—
	K008+ 150	380	220	184	—	—
	K008+ 5	135	560	380	300	—
	K008+5MK5	113	147	260	32	—
Organo-fluorine	3-3N	132	144	48	10	10
	32K	163	238	28	15	12
	FBF-74D	120	115	65	25	14
Polyester	KT	58	160	193	45	33
	PE214	140	174	163	—	—
	PE220	164	136	130	—	—
	FL-60	406	1200	533	56	40
	BB-1	126	912	787	140	80
Penol-formaldehyde	BF-2	310	984	443	55	15
	BF	180	745	422	60	45
	FKF	485	1240	662	175	45
	FRAM	174	478	195	45	17
	F-10	312	1170	477	62	15
Polyarylester	IF	202	390	348	110	38
	ED-5	275	1200	820	325	35
Epoxy	E-41	108	330	55	48	22
	E-33	10	155	72	30	18
	ED-28	70	110	255	84	22
	E-10	166	147	166	—	—
	B-49	174	388	127	106	35
Ethylcellulose - Urea formaldehyde	NI160	56	60	30	38	15
	K4-11-02	480	>2030	700	—	50

Table 1.

*[Composition not further specified]

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film-forming materials and higher for those based on organosilicon or inorganic materials. The μ of films based on film-forming materials belonging to a given class of chemical compounds varied but slightly. In contrast, τ was shown to depend on the molecular weight of the film-forming material and on the presence of surface-active groups. The τ was higher for films based on organic materials than for films based on inorganic materials. The functions $\tau = f(t^\circ)$ and $\mu = f(t^\circ)$ exhibited extrema; the highest τ and the lowest μ were observed at 100—200°C. Study of the effect of additives showed that at 40—300°C, solid film lubricants containing graphite had lower τ and μ than those containing MoS_2 . τ and μ were intermediate for films containing a graphite -- MoS_2 mixture (1/9 ratio). Cycling from room to a subzero temperature had almost no effect on τ and μ [a discrepancy is found between the subzero temperature quoted in the text (-25°C) and in Table 4 (-250°C) of the original article] Film thickness did not affect τ . No direct correlation could be established between thermal-oxidative stability and τ . Orig. art. has 6 figures and 4 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 003/ ATD PRESS: 5099

Card 3/3 *LC*

Rubueno

LATVIA / Chemical Technology. Food Industry.

H-26

Abs Jour : Ref Zhur - Khim., No. 12, 1958, No 41439

Author : Rubueno.

Inst : -

Title : The Optimum Conditions for Ripening of Cream Used in Latvian Butter.

Orig Pub : Tr. Latv. S-Kh. Akad., 1957, Vyp. 6, 495-504

Abstract : To prepare Latvian butter by means of ripening techniques, it is recommended that the physical ripening of cream take place for six hours at 6° C, after which time it is allowed to become sour at 10-12° C, while attaining a certain degree of acidity. If necessary, the cream is first made sour at 10-12° C (with a decrease in time to 14-16 hours), and after it attains the required acidity, the physical ripeness is carried out for 2 hours at 2° C. When butter is made sour at 18-20° C, it has inferior taste and flavor.

Card 1/1

RUBINKHIN, A. Ye., LEVITAN, F. I. and MASSINO, S. V.

"Organization of the Fight Against Tuberculosis", Tuberkulez, Chap. 34, pp 341-364, 1952

SO: Translation-M-809, 10 Oct. 1955.

RUBYAKOV, I.

RUBYAKOV, I.; MISHCHENKO, A.

Some more about teaching farms. Prof.-tekh.obr. 14 no.9:20-21
S '57. (MLRA 10:9)

1. Zamestitel' nachal'nika Altayskogo krayevogo upravleniya
trudovykh rezervov (for Rubyakov). 2. Direktor uchilishcha mekha-
nizatsii sel'skogo khozyaystva No.5, Chita.
(Farm mechanization--Study and teaching)

RUEZOV, I. A.

"Phylogenetic Parallelism of Parasites and Hosts and Its Significance in the Systematics and Biogeography" (p. 130) by Rubzov, I. A.

SO: Advances in Modern Biology, (Uspekhi Sovremennoi Biologii), Vol. XIII, No. 3, 1940

RUBTZOY, I. A.

"Synthesis of Troponone. II. Searching ways for the Synthesis of the Alkaloid Scopolamine."
Preobrajensky, M. A., Rubtsov, I. A., Dankova, T. F. and Pavlov, V. P. (p. 952)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1945, Volume 15, no. 11-12.

3C

Hydroxides of chromic oxide. S. I. Djatchkovski and V. K. Rubtsova (*J. Gen. Chem. Russ.*, 1946, 18, 380-384). Suspensions of $\text{Cr}(\text{OH})_3$ and $\text{Fe}(\text{OH})_3$ were exposed to temp. ranging from -182° to 240° , and were then filtered at room temp. The composition of the residues was $\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$ - 1:1 at -182° and -100° , 2:3 at -75° , 1:2 at -60° to -20° , 1:3 at -10° to 60° , 1:2 at 100° , and 2:3 at 150° to 200° ; $\text{Cr}_2\text{O}_3 \cdot \text{H}_2\text{O}$ - 2:3 at -100° , 1:2 at -75° to -60° , 1:3 at -20° , 1:3 at -10° to 60° , 2:3 at 100° , and 1:2 at 240° .
R. T.

43-51.4 METALLURGICAL LITERATURE CLASSIFICATION

RUBYAKOV I.

27-9-13/30

AUTHOR: Rubyakov, I., Deputy Chief of the Altay Kray Administration of Labor Reserves

TITLE: More About Training Farms (Yeshche raz ob uchebno - opytnykh khozyaystvakh)

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, 1957, Nr. 9(148) pp 20-21 (USSR)

ABSTRACT: The article is a response to an essay of I. Kiparenko which appeared in Nr. 4, 1957, of this periodical. The author emphasizes the necessity for good theoretical knowledge and thorough practical training of graduating mechanizers. He points out the deficiencies of the present system of practical training where groups of students are assigned to MTS tractor brigades, 5-15 km away from each other. In order to solve the problem, the Klyuchevskoye School of Agricultural Mechanization of the Altay Kray (Klyuchevskoye uchilishche mekhanizatsii sel'skogo khozyaystva Altayskogo kraya), and other schools, sent 1 or 2 groups to 200 - 300 ha farms where it was proved that practical training can be well organized. He shares Kiparenko's opinion to extensive training farms of 2,000 to

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More About Training Farms

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3,000 ha being placed at the schools' disposal provided it is grain growing soil. The author quotes the Klyuchevskoye School of Mechanization as an example, while the Inin School of Agricultural Mechanization (Ininskoye uchilishche mekhanizatsii sel'skogo khozyaystva), situated in the Gorno-Altay Autonomous Oblast (Gorno-Altayskaya avtonomnaya oblast) 1,200 m above sea level and raising primarily livestock would not be able to work such a big farm. He points to the tens of thousand of tractors and combines staying idle at the schools at the busiest time of agricultural work, and quotes five problems which would be solved if large training farms were set-up. The article cites one Slavic reference.

AVAILABLE: Library of Congress

Card 2/2

RUBYAKOV, I.

How to organize the repair of machines. Prof.-tekh. obr. 14 no.2:28-
29 F '57. (MLRA 10:4)

1. Zamestitel' nachal'nika Altayskogo krayevogo upravleniya trudovykh
rezervov.

(Farm mechanization--Study and teaching)

RUBYAKOV, I. (Altayskiy kray)

Training technicians en masse. Prof.tekh.obr. 13 no.4:7-9 Ap '56.
(MLRA 9:8)

1. Direktor uchilishcha mekhanizatsii sel'skogo khozyaystva No. 20.
(Agricultural machinery)

FEDORKOV, Nikolay Pavlovich [Fedorkov, Mykola]: RUBYN, M., red.

[Following the main line] Na mahistral'nomy shliakhu.
Odes'ke obl.vyd-vo., 1957. 18 p. (MIRA 12:2)
(Forging)

11

21

*Silvering of Mirror Surfaces by Cathodic Sputtering. M. Romanov, A. Rubzov, and G. Pokrowskii (*Physikal. Z. Sowjetunion*, 1934, 5, (5), 748-760). — [In German.] See *Met. Abs.*, 1934, 1, 328. —S. G.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

COUNTRY : Romania
 CATEGORY : Forestry. Forest Management. X
 ABS. JOUR. : RZhBiol., No. 14 1959, No. 53223
 AUTHOR : Bucureanu, V.
 INST. :
 TITLE : Certain Refinements with Regard to Our (Rumanian) Yield Tables
 ORIG. PUB. : Rev. padurilor, 1957, 71, No. 3, 436-442
 ABSTRACT : Citing the article by V. Ozhardzhov, "Rumanian Yield Tables" (Rev. padurilor, 1957, No. 3), the author, after calculating the errors in determining increment for four basic species (spruce, fir, beech, oak), came to the following conclusion. Application of the method of the Hungarian appraiser Z. Fekete resulted in the systematic lowering the volume of secondary wood, but not to the extent indicated by V. Ozhardzhov; with age the errors decrease. The errors do not show much influence on the establishment of the age for the main cut.--1. Yana

Card: 1/1

RUCAREANU, N.

Some specifications in connection with Rumanian production tables. p. 436

(REVISTA PADURILOR. Vol. 71, No. 7, July 1957. Bucuresti, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 10, October 1957. Uncl.

RUCAREANU, N.

What and which are the bases of forest management? p. 282.

REVISTA PADURILOR

Vol. 71, no. 5, May 1956

Romania

Source: EAST EUROPEAN LISTS Vol. 5, no. 10 Oct. 1956

RUCARJEANU, N.

"Management of the selection forest: an experimental method." p. 3. (REVISTA
PADURILOR, Vol. 68, no. 11, Nov. 1953, Bucuresti, Rumania)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 4, April 1954, Uncl.

RUCH, K., inz. dypl.

New achievements in the construction of ship hulls. Bud okretowe
Warszawa 8 n. 10:330-339 0 '63.

1. Instytut Badowy Okretow, Mostock.

1ST AND 2ND CODES																										3RD AND 4TH CODES																									
PROCESSES AND PROPERTIES INDEX																																																			
<i>co</i> Ripening of tomatoes previously kept in cold storage. A. A. Ruchelmann. <i>Kholodilnoe Dila</i> 13, No. 5, 25-8 (1935); <i>Chimie & industrie</i> 36, 1014.—Ripening in a C_2H_2 atm. of tomatoes kept in cold storage for a certain time differs considerably from the ripening of fresh tomatoes. Too prolonged storage impairs the quality of the tomatoes, gives them an uneven color, and produces wrinkles and spots. Under such conditions ripening is illusory, the tomatoes undergoing internal transformations that prevent their ripening and that are manifested outwardly by a green color, a firmer consistency and general withering. Normally, ripening gives rise to reactions inside the fruit that tend to convert the insol. nutritive products; cold storage impairs the fermentative functions of the fruit and after a time produces irreversible transformations, which are due not only to the temp., but also to the action of other constituents of the fruit accompanying the enzymes. A. P.-C.																																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																			
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RUCEV, Rusi D.

Isothermic conversion of austenite into chrome-nickel iron with spheroidal graphite. Tekhnika Bulg 10 no.1:30-31 '61.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
BC A-4 Nature of enzymes. I. Amylase and pepsin. L. E. ROSENFIELD, A. A. RUCHELMAN, and A. A. SMURAVSKA (Ukrain. Biochem. J., 1939, 13, 541-556).—Amylase is inactivated by aniline or NH_4OH; this effect is due to combination of these reagents with an aldehyde group necessary for activity of the enzyme. The activity of pepsin is unaffected by the above reagents. R. T.																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
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1ST AND 3RD ORDERS

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

BC
A-4

Nature of cyanides. II. Sulphates. L. E. Rosenfeld and A. A. Ruckenstein (*Urbain. Minum. J.*, 1940, 10, 53-59).—Using K phenyl sulphate as substrate, the action of sulphatase is inhibited by H_2O_2 and KCN, phenylhydrazine, and $NH_4OH.HCl$. It is concluded that sulphatase contains an aldehyde group. Similar work on amylase leads to similar results. E. M. W.

1ST AND 3RD ORDERS

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

BC
A-4

Nature of cyanides. II. Sulphates. L. E. Rosenfeld and A. A. Ruckenstein (*Urbain. Minum. J.*, 1940, 10, 53-59).—Using K phenyl sulphate as substrate, the action of sulphatase is inhibited by H_2O_2 and KCN, phenylhydrazine, and $NH_4OH.HCl$. It is concluded that sulphatase contains an aldehyde group. Similar work on amylase leads to similar results. E. M. W.

1ST AND 2ND ORDER										3RD AND 4TH ORDER									
PROCESSES AND PROPERTIES INDEX																			
BC Biochemical changes in heart and aorta during growth. A. A. RUDELMAN and A. A. SHURAVSKAYA (Ukrain. Biochem. J., 1939, 14, 501-517).—The water content of rabbit heart muscle falls from 81% at the age of 10 days to 77% at 155 days. The cholesterol content falls to a min. at 90 days, then rises slowly to the 150th day, and subsequently increases more rapidly; the lipin content rises after the 150th day. Total and non-protein-N rise to a max. on the 60th, and are min. on the 90th day, thereafter rising slowly to the 150th day, and rapidly after this. Polypeptide-N varies similarly, except that the min. is at 150 days. Variations in the cholesterol and lipin contents of the aorta are parallel to those in the heart; total and non-protein-N fall to a min. on the 30th day, rise to a max. on the 60th day, and again fall to a min. on the 90th day, then rising continuously. Polypeptide-N varies similarly, except that the second min. is on the 140th day. R. T.																			
ASS-5LA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST ORDER										2ND ORDER									
1ST ORDER										2ND ORDER									

1944 V, YE. 1.

Furnaces

Perfecting annealing furnaces, Selkhozmaschina No. 3, 1942.

Monthly List of Russian Accessions, Library of Congress, July 1942. Unclassified.

L 15623-63

ACCESSION NR: AP3006726

EWI(1)/EWP(q)/EWI(m)/BDS

APFIC/ASD

JD

8/0286/63/000/007/0019/0019

60

AUTHOR: Presnova, L. A.; Ruchen'kina, N. F.; Shvarts, A. A.; Yerastova, V. I.

TITLE: Magnetostriction ferrite. Class 21, No. 153755

SOURCE: Byul. izobret. i tovarn. znakov, no. 7, 1963, 19

TOPIC TAGS: magnetostriction ferrite, ferrite, ferric oxide, cobalt oxide, nickel oxide, copper

ABSTRACT: This Author Certificate was issued for a magnetostriction ferrite made from solid solutions of nickel and cobalt salts designed to ensure temperature stability of the resonant frequency and constant electromechanical coupling coefficient in the +60 to -60°C temperature range. The ferrite was prepared from 50—55 mol% Fe_2O_3 , 0.2—0.4 mol% CoO , 42—47 mol% NiO , and an admixture of 2—5 mol% copper.

ASSOCIATION: none

Card 1/2/

RUCKENSTEIN, E. (Bukharest)

Equations of heat transmission during turbulent flow in pipes.
Izv.An SSSR.Otd.tekh.nauk no.5:23-28 My '56. (MLRA 9:8)

1. Bukharestskiy politekhnicheskiy institut.
(Heat--Transmission) (Turbulence) (Fluid dynamics)

ARASHKEVICH, Vsevolod Markovich; RUCHEL'NIKOV, S.M., redaktor; LUCHKO, Yu.V., redaktor; KOVALENKO, N.I., tekhnicheskii redaktor.

[Non-ferrous ore dressing] Obogashchenie rud tsvetnykh metallov; uchebnik dlia rabochikh osnovnykh profesii obogatitel'nykh fabrik po obogashcheniiu rud tsvetnykh redkikh i blagorodnykh metallov. Sverdlovsk, Gos. nauchno-tekhn.izd-vo lit-ry po chenroi i tsvetnoi metallurgii Sverdlovskoe otd-nie, 1955. 319 p. (MLRA 8:11)
(Ore dressing)

RUCHIK, A. S.

"Method of Precipitating the Metals of the Fourth and Fifth Groups With Polysulfide of Hydrogen and Their Separation During Analysis of Arsenic Ores." Thesis for degree of Cand. Chemical Sci. Sub 29 Dec 50, Sci Inst of Fertilizers and Insectofungicides (imeni Ya. V. Samoylov), Ministry of Chemical Industry USSR

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

RUCHINSKIY, N.N.

USSR (600)

"Certain Problems in the Dynamics of Beams Under a Crane." Thesis for degree of Cand. Technical Sci. Sub 1 Nov. 49, Sci Res Inst of Industrial Structures.

Summary 82, 18 Dec '52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

RUCHINSKIY, M. N.

Girders

Calculating a beam subject to the action of a moving force of variable intensity, Inzh. sbor., No. 11, 1952

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified

KORENEV, B.G., professor, doktor tekhnicheskikh nauk; RUCHIMSKIY, M.N.,
kandidat tekhnicheskikh nauk, nauchnyy redaktor; BERDICHEVSKIY, G.I.,
redaktor; MEDVEDEV, L.Ya., tekhnicheskiiy redaktor.

[Problems in calculations for girders and plates on a cushion]
Voprosy rascheta balok i plit na uprugom osnovanii. Moskva, Gos.
izd-vo lit-ry po stroitel'stru i arkhitekture, 1954. 230 p.
(MIRA 8:1)

(Girders) (Elastic plates and shells)

RUCHIMSKIY, M.M., kandidat tekhnicheskikh nauk.

Experimental study of compensating properties of lenticular
compensators. Trudy VNII Stroinefti no.6:47-60 '54. (MIRA 10:1)
(Pipelines)

KORENEV, B.G., professor; RUCHIMSKIY, M.N., kandidat tekhnicheskikh nauk;
ROSTOVTSOVA, M.P., redaktor izdatel'stva; TOKER, A.M., tekhnicheskii
redaktor.

[Some problems of dynamic stresses in girders with an elastic
support] Nekotorye zadachi dinamiki balok na uprugom osnovanii.
Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1955. 42 p.
(Moscow. Tsentral'nyi nauchno-issledovatel'skii institut
promyshlennykh sooruzhenii. Nauchnoe soobshchenie, no.20).

(MLBA 9:11)

(Girders)

RUCHIMSKIY, M.N., kandidat tekhnicheskikh nauk (Moskva)

Permissible pipeline spans in connection with above-ground
laying. Stroi.pred.neft.prom. 1 no.7:8-11 S '56. (MLRA 9:10)

(Petroleum--Pipelines)

KORENEV, B.G., (Moskva); RUCHIMSKIY, M.N., (Moskva)

Effect of impulse loads on a girder resting on a foundation
having double elastic characteristics. Izv. AN SSSR. Otd.
tekhn. nauk no.6:157-158 Ja '56. (MLRA 9:9)

(Girders)

RUCHIMSKIY, M.N., kand.tekhn.nauk; RATTI, G.V.; KAPKANETS, V.I., red.;
POLYAKOV, M.G., tekhn.red.

[Instruction for determining loads acting on pipeline supports and establishing permissible spans between them] Ukazaniia po opredeleniiu nagruzok, deistvuiushchikh na opory truboprovodov, i dopuskaemykh proletov mezhdu ikh oporami. Moskva, Otdel nauchno-tekhn.informatsii, 1959. 96 p. (MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov (for Ruchimskiy). 3. Glavnyy konstruktor otdela kommunikatsiy Giprogaztoproma (for Ratti).
(Pipelines)

KORENEV, Boris Grigor'yevich; HUCHIMSKIY, M.N., red.; MARKUZON, I.A., red.; TUMARKINA, N.A., tekhn.red.

[Some problems on the theory of elasticity and heat conduction solvable in Bessel functions] Nekotorye zadachi teorii uprugosti i teploprovodnosti, reshaemye v besselevykh funktsiyakh. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 458 p.

(MIRA 13:6)

(Bessel's functions) (Elasticity) (Heat--Conduction)

RUCHIMSKIY, M.N.

Designing foundations for vibrating platforms. Stroi.mekh.1
rasch.soor. 2 no.1:51-3 of cover '60.

(MIRA 13:6)

(Concrete footings)

RUCHINSKIY, M.N.

More about the designing of industrial pipes. Stroi.mekh.i rasch.
soor. 2 no.4:46-47 '60. (MIRA 13:7)
(Pipe, Steel)

KAMERSHTEYN, Anatoliy Grigor'yevich; ROZHDESTVENSKIY, Vladimir
Vladimirovich; RUCHIMSKIY, Mark Nikolayevich; RABINOVICH,
Ye.Z., red.; POLOSINA, A.S., tekhn. red.

[Calculating the strength of pipelines] Raschet truboprovodov
na prochnost'; spravochnaia kniga. Moskva, Gostoptekhiizdat,
1963. 427 p. (MIRA 16:4)

(Pipelines)

RUCHIMSKIY, M.N. [deceased]

Concerning the criticism of E.S. Sorokin's hypothesis in the
book, "Principles of the design of buildings in seismic
districts". Stroi. mekh. i rasch. soor. 5 no.3:46-47 '63.
(MIRA 16:6)

(Friction)

5560

621.304/305.08

• Kassenberg K., Ruciński J. Switching, Signalling and Protecting Elements.

„Elementy łączeniowe sygnalizacyjne i zabezpieczające”. t. 3, Warszawa, 1956, PWT, 16”, 604 pp., figs., tabs.

The 3rd and final volume of a monograph concerned with the principles of operation, the calculation and design of the elements of telecommunication equipment. It contains the description of basic electromagnetic and mechanical phenomena which occur in non-polarized and polarized relays, the description of their types, design and calculation and the description of design and principle of operation of the protective devices.

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KAMERSHTEYN, Anatoliy Grigor'yevich; RUCHIMSKIY, Mark Nikolayevich;
SHAKHMAYEVA, Ye.A., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Strength analysis of factory piping] Raschet zavodskikh
truboprovodov na prochnost'. Moskva, Gos.nauchno-tekhn.
izd-vo nef. i gorno-toplivnoi lit-ry, 1959. 177 p. (MIRA 12:8)
(Pipe) (Factories--Equipment and supplies)

RUCHIMSKIY, M.N. (Moskva)

Stability analysis of overhead pipelines. Stroi. mekh. i rasch.
soor. no.1:32-36 '59. (MIRA 12:7)
(Pipelines) (Strains and stresses)

RUCHINSKIY, M., vrach-fiziolog; GRINBERG, L.

Therapeutic recompression. Rech. transp. 23 no.1:60 Ja '64.
(MIRA 18:11)

1. Kabinet funktsional'noy diagnostiki basseynovoy bol'nitsy
No.1 MOVVZO (for Ruchinskiy).

124-57-2-2189

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 103 (USSR)

AUTHOR: Ruchimskiy, M. N.

TITLE: Experimental Investigation of the Compensatory Effectiveness of Corrugated Expansion Joints (for Conduits) Eksperimental'noye issledovaniye kompensiruyushchey sposobnosti linzovykh kompensatirov (truboprovodov)

PERIODICAL: Tr. Vses. n.-i. in-ta po str-vu ob'yektov neft. i gazovoy prom-sti, 1954, Nr 6, pp 47-60

ABSTRACT: The calculation method for corrugated expansion joints proposed by S. N. Sokolov is examined. In the stress analysis of corrugated expansion joints the calculation of a toroid shell is replaced by that of annular plates fixed along their external and internal contour. It is assumed that the relationship between an axial loading and the yielding of the expansion joint constitutes a broken line consisting of three segments. In the first segment the straight line passes through the origin of the coordinates with a certain slope; in the second segment the straight line runs parallel to the axis of the yielding; in the last segment a linear increase in strength takes place. Fundamental calculation formulas

Card 1/1

124-57-2-2189

Experimental Investigation of the Compensatory Effectiveness (cont.)

are adduced for the determination of the minimal wall thickness of the corrugations, the permissible yield of an expansion joint, and the forces that correspond to that yield. The dimensions and types of expansion joints that were tested for axial compression and internal pressure are indicated; a description is also offered of a special test stand on which the tests were performed with the aid, in specific cases, of lever-type strain gages. The results obtained are analyzed.

T. N. Vasitsyna

1. Expansion joints--Stresses
2. Expansion joints--Mathematical analysis

Card 2/2

BUCHIMSKIY, M.N., kand. tekhn. nauk.

Calculating loads acting on pipeline supports when laying overhead
lines. Stroi. pred. neft. prom. 3 no.3 Mr '58. (MIRA 11:6)
(Pipelines)

RUCHIMSKIY, M.N., kand.tekhn.nauk.

Answer to our critics. Stroi. pred. neft. prom. 2 no.12:13-16
D '57. (MIRA 11:3)

(Pipelines)

KONEV, Vsevolod Dmitriyevich; RUCHIN, Serafim Mikhaylov_ch;
MARGULIS, A.Sh., red.

[Organization of accounting at enterprises; practices of
the Gorki Automobile Plant] Organizatsiia ucheta na pred-
priiatii; opyt Gor'kovskogo avtozavoda. Moskva, Gosfin-
izdat, 1962. 77 p. (MIRA 16:11)
(Industrial management)

ZVEREV, M.P.; RUCHINSKIY, S.P.; ZUBOV, P.I.

Thermal effect produced by the solution of polymers as
dependent on the nature of the solvent. Dokl. AN SSSR 149
no.1:128-130 Mr '63. (MIRA 16:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
M.V. Lomonosova i Institut fizicheskoy khimii AN SSSR.
Predstavleno akademikom V.A. Karginym.
(Polymers) (Heat of solution) (Plasticizers)

S/020/63/149/001/017/023
B101/B144

AUTHORS: Zverev, M. P., Ruchinskiy, S. P., Zubov, P. I.

TITLE: Dependence of the heat effects occurring on polymer dissolution on the nature of the solvent

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 1, 1963, 128 - 130

TEXT: The dissolution heat of SKS-30A (SKS-30A) divinyl styrene copolymer and SKN-26 (SKN-26) divinyl nitrile copolymer was determined together with the contraction Δv of the solution in ditolyl methane, dicumyl methane, dibutyl sebacinate, and dibutyl phthalate. The equation

$Q = -E_{11} - E_{22} + 2E_{12}$ (1) where E_{11} , E_{22} , E_{12} respectively denote the interaction of the molecules of the solvent, the polymer and the solvent plus polymer was found to be wrong. The nonpolar SKS-30A showed high heat effects in solvents with high dipole moment, the polar SKN-26 showed maximum heat effects in the weakly polar ditolyl methane and lesser heat effect in strongly polar solvents. Therefrom it is concluded that Eq.(1) must be completed by a member E'_{22} taking account of the energy of the

local bonds forming between the macromolecule links in the solution:

Card 1/2

Dependence of the heat...

S/020/63/149/001/017/023
B101/B144

$Q = -E_{11} - E_{22} + 2E_{12} + E'_{22}$ (2). The bond between the links is manifest, e.g., from the contraction of SKN-26 solution in solvents with high dipole moment corresponding to coiling of the macromolecules. In SKS-30A, the intrinsic viscosity decreases when the dipole moment of the solvent increases. The effect of the plasticizer on the flow point is discussed. Addition of ditolyl methane, dibutyl sebacinate or dibutyl phthalate reduces gradually the flow point of SKS-30A. Small additions (1.5 %) of dicumyl methane increase the flow point, greater additions reduce it again. This may be important for the plasticizing of polymers and for fiber formation. There are 1 figure and 2 tables.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov); Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: August 20, 1962, by V. A. Kargin, Academician

SUBMITTED: August 20, 1962

Card 2/2

Ruchinskiy, V. R.

S/064/60/000/004/001/006
B015/B060

AUTHORS: Furman, M. S., Doctor of Chemical Sciences, Gol'dman, A. M.,
Candidate of Chemical Sciences, Olevskiy, V. M.,
Candidate of Technical Sciences, Ruchinskiy, V. R.

TITLE: Catalytic Oxidation of Cyclohexane With Compressed Air
by the Continuous Method

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 4, pp. 1-8

TEXT: I. M. Rozenfel'd, A. A. Lavrichenko, I. L. Vaysman, N. K.
Zhitnikova, and the personnel of the pilot plant of the Gubakhinskiy
khimicheskii zavod (Gubakha Chemical Works) took part in the work
described here. The said pilot plant was set up for the experiments
under discussion, and is schematically reproduced in Fig. . The long-
lasting continuous operation of this pilot plant for the oxidation of
cyclohexane with atmospheric oxygen under pressure yielded the following
results among others: At a pressure of 18-24 atm, a temperature of
130-140°C, and with cobalt stearate serving as a catalyst in a

Card 1/3

Catalytic Oxidation of Cyclohexane With
Compressed Air by the Continuous MethodS/064/60/000/004/001/006
B015/B060

concentration of 3 g per 100 l of cyclohexane, the conversion of cyclohexane amounts to 10-12% in one passage, and the yield of anone, anal, and adipic acid is 80-85% (of the reacted cyclohexane). Water and benzene reduce the oxidation rate. Slowing down the air supply improves the exploitation of oxygen. Apart from adipic acid there develop succinic, glutaric, and oxalic acids, with the part by weight of low dicarboxylic acids amounting to about 20% of the total amount of organic acids. The process of dehydrogenation of cyclohexanol (which was obtained by oxidation of cyclohexane) was studied on a continuously working pilot plant (Fig. 4) (with the assistance of V. U. Roshal'), and was compared with the results obtained from cyclohexanol produced from phenol (Table 1). On a pilot plant (Fig. 5) the authors worked out a scheme (Table 2) for separating the products obtained from the oxidation of cyclohexane. The products obtained corresponded, as to their quality, to the analogous products obtained in the production of caprolactam from phenol. N. I. Chernozhukov, S. E. Kreyn, K. I. Ivanov, I. V. Berezin, Ye. T. Denisov, N. M. Emanuel', A. I. Finkel'shteyn, Candidate of Chemical Sciences, and L. Kh. Freydlin are mentioned in the paper.

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Card 2/3

Catalytic Oxidation of Cyclohexane With
Compressed Air by the Continuous Method

S/064/60/000/004/001/006
B015/B060

Mention is made, moreover, of experiments of noncatalytic oxidation of
cyclohexane by means of air, carried out at the GIAP (State Scientific
Research and Planning Institute of the Nitrogen Industry) in the years
from 1948 to 1953. There are 2 figures, 4 tables, and 19 references:
14 Soviet, 3 US, 1 French, and 1 British.

✓

Card 3/3

FURMAN, M.S., doktor khim.nauk; GOL'DMAN, A.M., kand.nauk; OLEVSKIY,
V.M., kand.tekhn.nauk; RUCHINSKIY, V.R.; Prinimali uchastiye:
ROZENFEL'D, I.M.; LAVRICHENKO, A.A.; VAYSMAN, I.L.;
ZHITNIKOVA, N.K.

Catalytic oxidation of cyclohexane by air under pressure
by the continuous method. Khim.prom. no.4:265-272
Je '60. (MIRA 13:8)

(Cyclohexane) (Oxidation)

RUCHINSKIY, V. R., and DIL'MAN, V. V.

"Intensification of Mass Transfer in a Cross Flow of Gas and Liquid."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

S/064/61/000/001/009/011
B132/B218

AUTHORS: Olevskiy, V. M., Ruchinskiy, V. R.

TITLE: Use of film columns with plane-parallel plates for separating the oxidation products of cyclohexane by means of rectification

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1961, 57-62

TEXT: In the production of caprolactam and adipic acid, the separation of the oxidation products of cyclohexane makes it necessary to distill off large quantities of liquid. This distillation must be done at very low temperatures and pressures so as to avoid resin formation. The authors describe highly efficient pellicular columns with plane-parallel inserts exhibiting a low hydraulic resistance. They determined the efficiency and hydraulic resistance during the distillation of unused cyclohexane at atmospheric pressure, and during vacuum rectification of a mixture of cyclohexanone-cyclohexanol with oil. The experimental unit is shown in Fig. 1, and the reflux regulator in Fig. 2. The plates of the plane-

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Card 1/9

Use of film columns with plane-parallel...

S/064/61/000/001/009/011
B132/B218

parallel insert have a thickness of 5 mm and are made of ordinary sheet metal as used for roofing. They are covered with fine wire grids which, owing to their capillary action, bring about a better liquid distribution. Sixteen inserts of plane-parallel plates with a height of 710 mm are installed inside the column at a distance of 7 mm from each other. The maximum wash intensity was found to be 800 l/hr, which corresponds to a load of 266 kg/m sec referred to 1 m² of the plate, or to 45.2 m³/m²hr of the linear vapor velocity $w_g = 3.36$ m/sec, in which case overloading occurs at a Reynolds number in the gaseous phase of $Re_g = 16,700$. However, when ordinary plate columns are used, this overload is attained at $w_g = 0.78$ m/sec (vapor velocity four times lower). Another advantage of the new columns is the fact that no increase in resistance occurs near the maximum load, which is characteristic of conventional plate columns. For the dependence of the height equivalent of mass transfer on the Reynolds number, the general formula for calculating the diffusion resistance in the gaseous phase holds:

$$h_g = A Re_g^m (Pr'_g)^{n_d} k$$
 Here, Pr'_g denotes the Prandtl diffusion criterion.

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Use of film columns with plane-parallel...

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B132/B218

The efficiency of plane-parallel inserts was determined experimentally by taking samples of the distillate, both in the concentrating and in the distilling section. A comparison showed excellent efficiency of the plane-parallel insert. Fig. 5 illustrates the dependence of the efficiency of plane-parallel inserts on Re_g . The formula

$h_g = \frac{H}{m_y}$ serves for calculating h_g (height equivalent of mass-transfer

unit together with the calculation of the entire diffusion resistance).

Experiments were made with values of Re_g varying between 1,000 and 13,000, which corresponds to $w^g = 0.205-2.62$ m/sec. Up to $Re_g = 8,000$, h_g increases uniformly and then remains almost constant up to $Re_g = 13,000$.

Fig. 6 illustrates the dependence of the efficiency of the insert on Re_f (Reynolds number in the liquid phase) for the distilling section.

Experimental results showed satisfactory efficiency of the plane-parallel inserts, even with a wash intensity that is ten times higher than in plate columns. When cyclohexane is distilled, the wash intensity in the distilling section is 2.6 times higher than in the concentration section. ✓

Card 3/9

Use of film columns with plane-parallel...

S/064/61/000/001/009/011
B132/B218

Such columns with plane-parallel inserts proved to be very efficient for vacuum rectification. Due to their low operating temperature, the formation of cyclohexylides and cyclohexanone-2 is excluded. Overload in this case occurs at 650 l/hr. As referred to plate surface, this corresponds to 278 kg/m.hr or $38.96 \text{ m}^3/\text{m}^2$ at a linear vapor velocity of $w_g = 12.65 \text{ m/sec}$ (these indications correspond to a Reynolds number of $Re_g = 17,200$). 15 transfer units are necessary for rectification at 60 mm Hg and a reflux number of 3.5. In this case, the total height of the insert amounts to 20 m; the resistance of the column varies from 25 to 40 mm Hg. There are 7 figures and 18 references: 12 Soviet-bloc and 6 non-Soviet-bloc.

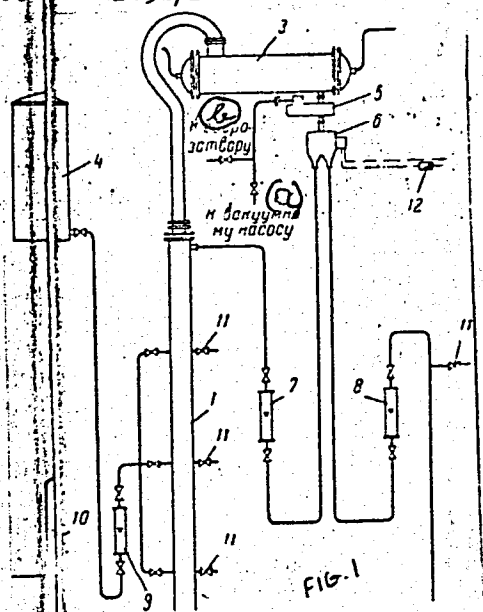
Card 4/9

Use of film columns with plane-parallel...

Fig. 1: Schematic representation of the unit. Legend: 1) Column; 2) boiler; 3) dephlegmator; 4) container for initial mixture; 5) separating vessel; 6) reflux regulator; 7-10) rotameters; 11) sample taking; 12) time relay, a) to vacuum pump, b) to water tap.

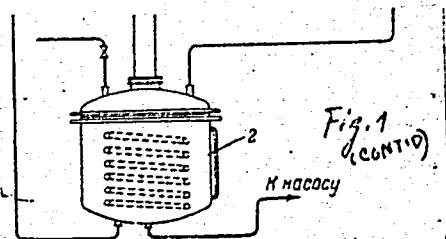
Card 5/9

S/064/61/000/001/009/011
B132/B218



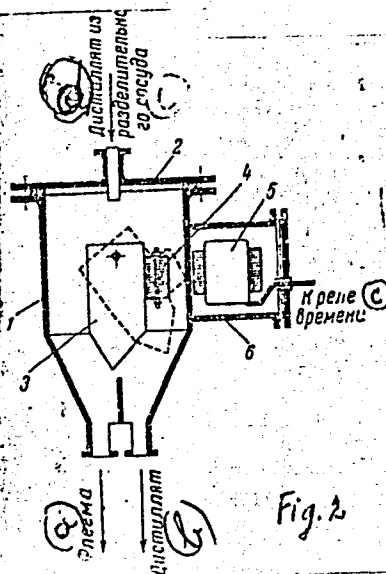
Use of film columns with plane-parallel...

Fig. 2: Reflux regulator. Legend: 1) Body; 2) cover; 3) funnel; 4) plate of soft iron; 5) electromagnet; 6) housing of electromagnet; a) reflux, b) distillate, c) to time relay, d) distillate from separating vessel.



Card 6/9

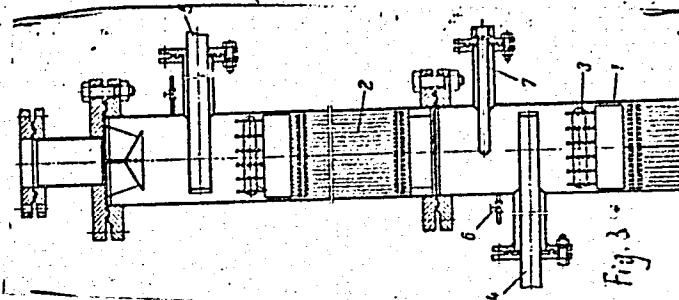
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B132/B218



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B132/B218

Use of film columns with plane-parallel...

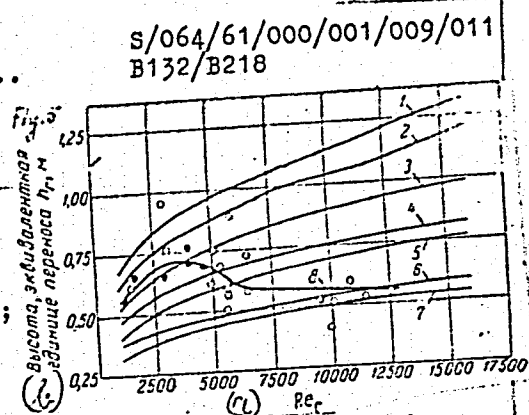
Fig. 3: Column with plane-parallel insert.
Legend: 1) Body of column; 2) insert;
3) distributor; 4) connecting pipe for
feeding; 5) connecting pipe for wash;
6) sample taking; 7) housing of thermometer.



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Use of film columns with plane-parallel...

Fig. 5: Dependence of the efficiency of the plane-parallel insert on Re_g . Black circles indicate the amplifying system, white circles the infinite reflux number. Legend: a) Re_g , b) height equivalent of mass-transfer unit. Curve 1) $h_g = 7.0 Re_g^{0.23} (Pr_g')^{-0.67} d$; curve 2) $h_g = 7.63 Re_g^{0.23} (Pr_g')^{-0.67}$; curve 3) $h_g = 11.1 Re_g^{0.23} (Pr_g')^{0.67} d^{0.64}$; curve 4) $h_g = 10.9 Re_g^{0.23} (Pr_g')^{0.67} r_h$; curve 5) $h_g = 30.32 Re_g^{0.23} (Pr_g')^{0.67}$; curve 6) $h_g = 10.85 Re_g^{0.17} (Pr_g')^{0.56} d$; curve 7) $h_g = 3.79 Re_g^{0.23} (Pr_g')^{2/3} d$; curve 8) for experimental values of the authors.

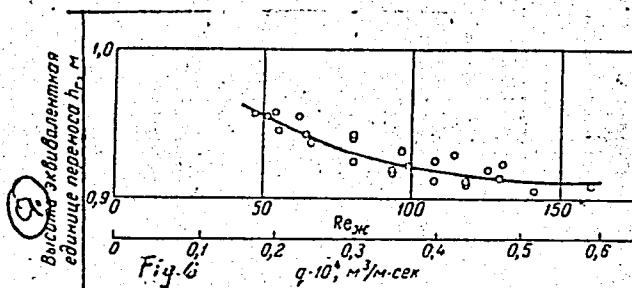


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Use of film columns with plane-parallel...

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Fig. 6: Dependence of the efficiency of the insert on Re_f . Re_f denotes the Reynold criterion of the liquid phase.
Legend: a) Height equivalent of mass-transfer unit.



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B124/B206

AUTHOR: Ruchinskiy, V. R.

TITLE: Vsesoyuznoye soveshchaniye po teplo- i massoobmenu (All-Union Conference on Heat and Mass Exchange)

PERIODICAL: Khimicheskaya promyshlennost', no. 7, 1961, 72 - 73

TEXT: The above-mentioned Conference, organized on the initiative of the AS BSSR, Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya SSSR (Ministry of Higher and Secondary Special Education, USSR), Akademiya Stroitel'stva i arkhitektury SSSR (Academy of Civil Engineering and Architecture, USSR), Institut mekhaniki AN SSSR (Institute of Mechanics, AS USSR) and Energeticheskiy institut im. G. M. Krzhizhanovskogo (Institute of Power Engineering imeni G. M. Krzhizhanovskiy), was held in Minsk from June 5 to 9, 1961. It was attended by scientists from Poland, Czechoslovakia, Hungary, the USA, Great Britain and the Netherlands. The following lectures were delivered at the plenary sessions: A. V. Lykov, on the application of the thermodynamics of irreversible processes for investigating heat and mass exchange in the boundary layer; S. S. Kutateladze, on

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Vsesoyuznoye soveshchaniye...

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V. B. Kvash, on determining and warranting the optimum temperature field in chemical reactors, and I. P. Slobodyanik, on a new method for the analysis of chemical sorption in packed columns. The seventh section dealt with heat and mass exchange during drying processes; lectures were delivered in this connection by S. Endrényi (Hungary), Yu. A. Mikhaylov, M. F. Kazanskiy, P. P. Lutsik, V. N. Oleynikov, V. V. Krasnikov, V. A. Danilov, P. D. Lebedev and B. N. Leonchik. In the eighth section, lectures were delivered on heat and mass exchange in the manufacture of building materials, and the ninth section dealt with problems of determining thermophysical characteristics of various materials. In its resolutions, the Conference stated that the development of new machines and devices must be based on the latest achievements of thermics. Heat exchange and exchange of mass at very high flow rates, various phase changes, firing, chemical reactions etc. are pointed out, for which the thermodynamics of irreversible processes, the theory of the turbulent motion of nonisothermal and inhomogeneous currents, etc., must be developed.

Card 3/3

KAN, S.V.; OLEVSKIY, V.M.; RUCHINSKIY, V.R.; KOCHERGIN, N.A.; BESSMERTNAYA,
A.I.

Studying mass transfer and liquid distribution in a tower with
plane-parallel packing. Khim. prom. 41 no.10:770-773 O '65.
(MIRA 18:11)

VINOGRADSKIY, B.I.; GORODHANKIN, B.V.; OLIVSKIY, V.N.; RUCHINSKIY, V.R.

Carbon dioxide absorption under pressure in scrubbers with
flat parallel packs. *Gaz. prom.* 10 no.7:49-53 '65.
(MIRA 18:8)

UNCLASSIFIED

All-Union Committee on Joint Exchanges and Trade Relations

Min. of Foreign Affairs (Moscow) (11.12.1986)

(11.12.1986)

(11.12.1986)

RUCHINSKIY, V. R. and BIL'MAN, V. V.

"Intensification of mass-exchange in an intersection of liquid and gas flows."

Report presented at the 1st All-Union Conference on Heat- and Mass- Exchange, Minsk, BSSR, 5-9 June 1961

RUCHINSKIĭ, V. R.; KIL'MAN, V. V.

"The Intensification of Mass Transfer in a Cross Flow of Gass and Liquid"

Report presented at the Conference on Heat and Mass Transfer.
Minsk, USSR, 5-10 June 61

Various schemes of interaction of liquid and gaseous phases at mass transfer (unflow, counterflow, crossflow) are reviewed.

DIL'MAN, V.V. (Moskva); RUCHINSKIY, V.R. (Moskva)

Increasing the efficiency of apparatuses for mass transfer.

Izv. AN SSSR. Otd. tekhn. nauk. Met. i topl. no.4:160-165

Jl-Ag '61.

(MIRA 14:8)

(Mass transfer)

(Chemical engineering--Apparatus and supplies)

RUCHINSKIY, V.R.

Design of columns for the rectification of binary mixtures in vacuo.
Khim.prom. no.5:344-347 My '61. (MIRA 14:6)
(Distillation, Fractional)

RUCHINSKIY, V. R.

Cand Tec Sci, Diss -- "Investigations in the field of separating the by-products from caprolactam by the method of cyclohexane oxidation". Moscow, 1961. 19 pp, 20 cm (Min of Higher and Inter Spec Educ RSFSR. Moscow Order of Lenin Chem-Technol Inst imeni D. I. Mendeleyev), 150 copies, Not for sale, 10 works by the author listed at end of text (KL, No 9, 1961, p 184, No 24366). [61-52302]

RUCHINSKIY, V.R.

Conference on the intensification of mass transfer processes. Khim.
prom. no. 2:147 F '61.

(Mass transfer--Congresses)

(MIRA 14:4)

RUCHITSA, N.

In the struggle against mismanagement. Fin.SSSR 37 no.2:51-52
F '63. (MIRA 16:2)

1. Kontroler-revizor Kontrol'no-revizionnogo upravleniya
Ministerstva finansov UkrSSR po Donetsku.
(Donetsk Province—Auditing and inspection)

USSR/Diseases of Farm Animals - Diseases Caused by Bacteria
and Fungi

R

Abs Jour : Ref Zhur Biol., No 5, 1959, 21377
Author : Ruchiy, G.D.
Inst : Leningrad Veterinary Institute
Title : Treatment and Prophylaxis of Vibriosis in Cattle.
Orig Pub : Sb. tr. Lening. n.-i. vet. in-ta, 1957, vyp. 7, 67-75
Abstract : Two million units of penicillin and two million units of streptomycin dissolved in water and emulsified in 40 ml of oil, were introduced once daily for 4 consecutive days into the upper third of the prepuce followed by a massage of the latter. At the same time and periods, penicillin was intramuscularly injected in 4 thousand units dosages per 1 kg. By using this method of treatment, a complete recovery of the animals was achieved. -- A.D. Musin

Card 1/1

RUCHIN, S.

Organization of intraplant transportation work. Sots.trud 7
no.3:117-119 Mr '62. (MIRA 15:3)

1. Gor'kovskiy avtomobil'nyy zavod.
(Gorkiy--Automobile industry) (Material handling)

BARBARASH, I.P., kand.tekhn.nauk; RUCHKAN, M.B., inzh.

Unit for the manufacture of three-dimensional blocks the size
of two rooms. Mekh. stroi. 19 no.4:8-10 Ap '62. (MIRA 15:9)
(Precast concrete) (Buildings, Prefabricated)

RUCHKIN, V.M.; STRAUSMAN, R.Ya.

Electric blasting in sections which are hazardous because of
stray currents. Vzryv. delo no.48/5:87-92 '62. (MIRA 15:9)

1. Proizvodstvenno-eksperimental'noye upravleniye tresta
Soyuzvzryvprom.

(Blasting)

RUCHKIN, N. M.

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PHASE I BOOK EXPLOITATION

SOV/6098

Assonov, V. A., and L. A. Paporotskiy, Resp. Eds.

Novoye v sredstvakh i sposobakh vzryvaniya (New Developments in
Blasting Means and Methods). Moscow, Gosgortekhnizdat, 1962.
124 p. (Series: Vzryvnoye delo; Sbornik no. 48/5) Errata
slip inserted. 3000 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye gornoye obshchestvo.

Ed. of Publishing House: A. Ya. Koston'yan; Tech. Eds.: L. I.
Minsker and G. M. Il'inskaya.

PURPOSE: The book is intended for mining engineers, workers
in scientific research and planning organizations, and also
for teachers and students of mining and technical schools.

COVERAGE: This collection of articles describes new blasting
means and methods, means of protecting electric detonators
from stray currents, and improved methods of short-delay
detonation.

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